

IN THE CLAIMS

Please cancel claims 2 and 4 without prejudice or disclaimer of subject matter.

Please amend claims 1, 3, 5, and 6, and add new claims 10-14, as follows.

1. (Currently Amended) A sensor comprising:

a waveguide for allowing an electromagnetic wave to propagate therethrough and allowing an object to be disposed at a plurality of positions thereof;
a detecting portion for detecting the electromagnetic wave which has interacted with the object at the plurality of positions and propagated through the waveguide; and
an object disposing means for disposing the object at the plurality of positions, the object disposing means being periodically disposed at intervals of an order of a wavelength of the electromagnetic wave such that the object and the electromagnetic wave propagating through the waveguide interact with each other,

wherein a property of the object is analyzed or identified based on [[an]] information obtained from the electromagnetic wave detected by the detecting portion.

2. (Cancelled)

3. (Currently Amended) The sensor according to claim [[2]] 1, wherein the object disposing means comprises any one of a drop means for dropping the object at the plurality of positions, a protrusion shape a hole pattern, a groove pattern, a protrusion shape pattern, and a pattern including a hydrophilic portion and a hydrophobic portion.

4. (Cancelled)

5. (Currently Amended) A sensing apparatus sensor having ~~the sensor~~ a plurality of the sensor set forth in claim 1 ~~provided in plurality on a substrate arranged in an array.~~

6. (Currently Amended) A sensing apparatus comprising:

the sensor set forth in claim 1; and

a storage portion for storing [[an]] information associated with the property of the object,

wherein the information obtained ~~from the electromagnetic wave detected by the detecting portion~~ is compared with the information stored in the storage portion to analyze or identify the property of the object by the detecting portion and the information stored in the storage portion are used to analyze or identify the property of the object.

7. (Original) A sensing apparatus comprising:

the sensor set forth in claim 1; and

means for coupling the electromagnetic wave into the waveguide for allowing the electromagnetic wave to propagate therethrough.

8. (Withdrawn) A method of analyzing or identifying a property of an object using an electromagnetic wave, comprising the steps of:

disposing an object at a plurality of positions of a waveguide for allowing an electromagnetic wave to propagate therethrough; and

detecting the electromagnetic wave which interacted with the object at the plurality of positions and propagated through the waveguide and analyzing or identifying a property of the object based on an information obtained from the detected electromagnetic wave.

9. (Withdrawn) The method according to claim 8, wherein the step of disposing the object at the plurality of positions comprises periodically disposing the object at the plurality of positions.

10. (New) The sensor according to claim 1, wherein the waveguide comprises a conductor and a ground conductor provided with a minute gap there between, and wherein the object disposing means has a structure in which the object is disposed in the minute gap at a pitch corresponding to a half of the wavelength of the electromagnetic wave.

11. (New) A sensor comprising:

a waveguide for allowing an electromagnetic wave of 30 GHz to 30 THz to propagate therethrough and allowing an object disposed thereon to be sensed;

an object disposing means for disposing the object on the waveguide; and

a detecting portion for detecting the electromagnetic wave which has propagated through the waveguide,

wherein the object disposing means comprises an ejection means for ejecting and disposing the object at a plurality of positions on the waveguide located at intervals such that the object and the electromagnetic wave propagating through the waveguide interact with each other.

12. (New) A sensor comprising:

a waveguide for allowing an electromagnetic wave of 30 GHz to 30 THz to propagate therethrough and allowing an object disposed thereon to be sensed;

an object disposing means for disposing the object on the waveguide; and

a detecting portion for detecting the electromagnetic wave which has propagated through the waveguide,

wherein the object disposing means comprises a protrusion shape pattern or a pattern including a hydrophilic portion and a hydrophobic portion, for disposing the object at a plurality of positions on the waveguide located at intervals such that the object and the electromagnetic wave propagating through the waveguide interact with each other.

13. (New) A sensing apparatus for sensing an object by using a sensor and information obtained from a detection portion constituting the sensor, which comprises:

a sensor comprising a waveguide for allowing an electromagnetic wave of 30 GHz to 30 THz to propagate therethrough and allowing an object disposed thereon to be sensed, and a detecting portion for detecting the electromagnetic wave which has propagated through the waveguide;

an ejection means for disposing the object at a plurality of positions on the waveguide located at intervals such that the object and the electromagnetic wave propagating through the waveguide interact with each other; and

a storage portion for storing information associated with a property of the object, wherein information obtained by the detecting portion and the information stored in the storage portion are used to analyze or identify the property of the object.

14. (New) A sensor comprising:

a waveguide for allowing an electromagnetic wave of 30 GHz to 30 THz to propagate therethrough and allowing an object disposed thereon to be sensed;

an object disposing means for disposing the object on the waveguide; and

a detecting portion for detecting the electromagnetic wave which has propagated through the waveguide,

wherein the object disposing means comprises any one of an ejection means for ejecting the object, a protrusion shape pattern, and a pattern including a hydrophilic portion and a hydrophobic portion, for disposing the object at a plurality of positions on the waveguide located at intervals such that the object and the electromagnetic wave propagating through the waveguide interact with each other.